CLAIMS:

1.   A magnetic head testing apparatus, comprising:

reference information storing means for holding a predetermined reference sampling period and a reference number of samplings;

5   sampling means for sampling reproduced data read out a plurality of times from a magnetic medium in said predetermined reference sampling period;

sampling number acquiring means for obtaining a sampling number of measured data from said reproduced data based on a result of sampling;

sampling number ratio calculating means for calculating a ratio of said

10   sampling number of said measured data and a reference sampling number;

sampling data re-acquiring means for changing said sampling period of said measured data and re-acquiring sampling data depending on said calculated ratio; and

measured data overlap-displaying means for overlap-displaying said sampling data re-acquired from a plurality of measured data.

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2.   The magnetic head testing apparatus according to claim 1, wherein said sampling number acquiring means further comprises:

average value acquiring means for obtaining each average value of a difference between peak phases of preamble and postamble from said reproduced data

20   having preamble, measured data, and postamble;

phase acquiring means for acquiring a peak phase, preamble obtained from said average value, and preamble in which a square sum of a phase difference of postamble from each said peak phase and said postamble phase;

re-sampling period acquiring means for acquiring a re-sampling period

5   from a phase difference between said acquired preamble and postamble and a predetermined number of bits therebetween;

measured data phase difference acquiring means for determining a data start phase and a data end phase of said measured data from said sampling period acquired and then acquiring a phase difference thereof; and

10   sampling number calculating means for calculating a sampling number of said measured data from said acquired phase difference.

3.   The magnetic head testing apparatus according to claim 2, further comprising means for storing as an amplitude compensation coefficient a value obtained

15   by dividing a calculated average value of levels at each bit position with an expected value, in order to set an amplitude at each said bit position of PR4 equalization to an expected value at a time of re-compensation of a reference phase position in a preamble part and postamble part, and for conducting an amplitude compensation by multiplying said amplitude compensation coefficient to data at a time of setting a first time axis to a

20   second time axis of a reference waveform data.

4.   The magnetic head testing apparatus according to claim 3, further comprising means for obtaining errors from an expected value for said each bit at said time of re-compensation of said reference phase position in said preamble part and post-amble part, and means for conducting phase matching by obtaining an average of many

5   bits of preceding and succeeding bits in the magnetic head testing apparatus.

5.   The magnetic head testing apparatus according to claim 3, further comprising means for calculating and storing a Viterbi Metric Margin at a time of PRML process in said magnetic head testing apparatus.

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6.   A method of testing a magnetic head, comprising the steps of:

holding a predetermined reference sampling period and a reference number of samplings;

sampling reproduced data read out a plurality of times from a magnetic

15   medium in said predetermined reference sampling period;

acquiring a sampling number of measured data from said reproduced data based on a result of sampling;

calculating a ratio of said sampling number of said measured data and a reference sampling number;

20   re-acquiring sampling data depending on said calculated ratio and changing said sampling period of said measured data; and

overlap-displaying said sampling data re-acquired from a plurality of measured data.